

and their bodies were so numerous around the trunks of the previously defoliated trees that a pile two feet across and a foot high was raked from around a single tree. The trees which were defoliated in 1919 had, in August, 1920, a very sparse crop of new, short, light green needles, and these will probably be destroyed in the fall by the new generation of caterpillars which were emerging September 1, 1920. A second defoliation will undoubtedly kill the trees either of itself or indirectly by so weakening them that *Dendroctonus brevicomis* will enter.

The moths appear to be spreading from this center, as many individuals were picked up at Chiloquin and Klamath Falls,¹ where they had probably been attracted to the arc lights. A few individual specimens were found, by Mr. J. C. Patterson, as far west as Jenny Creek in Jackson County.

CONTROL:

Undoubtedly there are natural enemies of this moth present, but the limited time spent in the locality precluded the possibility of ascertaining what parasites were there and to what extent they existed. The larvæ would undoubtedly succumb to any of the ordinary poison sprays, but the cost of spraying large forest trees would be enormous and only justifiable as a coöperative proposition to prevent the spread of the moth to adjacent territory. The limited area in which they now occur might well be cleaned up at a moderate cost, thus making sure that the surrounding territory would be protected for some time to come.

MISCELLANEOUS NOTES.

The Position of the Dioptidæ (Lepidoptera): In my paper in *Psyche* (23: 191) I note the Dioptidæ as lacking a tympanum. More careful study shows the tympanum is present, though very small and unspecialized in the typical forms, so that the family falls naturally at the foot of the series leading up to the Notodontidæ, Noctuidæ and Arctiidæ, having an upright egg, a larva with uniordinal hooks and metathoracic tympanum; in fact, at present the family is not really distinguished from the Notodontidæ in any very tangible way. The

¹ About 40 miles from the center of infestation.

enlarged spiracle, noted by Prout, I have not been able to verify. In practice there is never any confusion with the Notodontidæ, but with the Geometridæ, a structurally widely separated family.—WM. T. M. FORBES.

Stridulation in Another Family of Lepidoptera: Stridulation has already been reported in a few Lepidoptera (Nymphalidæ, Noctuidæ, Agaristidæ). Last year, collecting a few miles back of El Encanto in the Putumayo district of South America, several males of the Dioptid, *Euchontha sublactigera*, were taken which made a loud squeaking sound in the net. The stridulating organ is undoubtedly the highly modified fore wing, with the raised file-like veins M₁ and 2. The female was not observed, but undoubtedly is silent and has the venation unmodified.—WM. T. M. FORBES.

Haploa and Callimorpha (Lepidoptera): The Old World genus *Callimorpha* and the nearctic *Haploa* appear to form the connecting link between the Hypsid-Pericopid series and the Arctiidæ. The larvæ of the two are identical in structure and unlike either of the related types, having two subventral warts on each of the first two segments of the abdomen, unlike the Arctiidæ, and wart *iv* in its normal place behind the spiracle on the seventh segment of the abdomen, as in the Arctiidæ and unlike the Pericopidæ. The true Hypsidæ, which are confused with the Pericopidæ by Hampson and others, appear to have the tufted hair much reduced, but have not been properly studied, unless possibly *Doa*, studied by Fracker, can belong to the family. In the imago the same intermediate condition occurs, as the base of Sc of the hind wing is much swollen, as in the Arctiidæ, while the fusion of Sc and R is shorter than in any other known Arctiid, and in *Callimorpha* as short as in some Pericopidæ. In the Hypsidæ the two veins are separate.

Until more of the exotic larvæ are known it would probably be best to retain the two genera in the Arctiidæ, where they have been generally placed. In any case, there seems little to gain by separating them from each other as Hampson has done. If not specially allowed for both alike would run to the Noctuidæ in a key, not to either Arctiidæ or Hypsidæ. Of course, this makes the use of the name Callimorphidæ for the Hypsidæ or Pericopidæ impossible.—WM. T. M. FORBES.

An African Pterothysanid (Lepidoptera): In Hampson's recent revision of certain small families the Pterothysanidæ stand represented by a single Oriental genus, of very few species. Lately the Madagascar *Caloschemia monilifera* has come to hand, and proves to be a second Pterothysanid, very close to *Pterothysanus*, perhaps not generically distinct. The venation is the same and in both the frenulum is rudimentary (not absent as generally stated). The tympanum is absent, the metathorax being well chitinized and simple in type, practically like the mesothorax at first glance. This shows there is no connection with the Liparidæ or Hypsidæ, where the genus *Caloschemia* now stands. The free R_5 (vein 7) is also practically unique. Both have the angulate Sc and brace-vein of the hind wing characteristic of the Geometridæ and Callidulidæ, which are probably the closest relatives. The two genera may be distinguished as follows:

Pterothysanus: Palpi drooping, hairy below, fringe on inner margin of hind wing extremely long.

Caloschemia: Palpi porrect, smooth-scaled and rather longer, inner margin with fringe more moderately lengthened.

The family will be another of those interesting links between the Malagasy and Oriental regions, like *Euplaa* and *Papilio antenor*.—
WM. T. M. FORBES.

Notes on Katydids.—In this JOURNAL for March, 1920, it is stated that the one-time very abundant katydid, *Pterophylla camellifolia* (Fabricius) was becoming extinct within the limits of New York City. For several years search had been made on Staten Island, where it was once very common, but none had been found. During the summer of 1921 Miss Miriam Campbell discovered a small colony of this species in the mixed growth of pines, oaks, etc., extending along the northerly boundary of the Moravian Cemetery. Search was continued in other parts of the Island, but no additional *Pterophylla* were located. Mr. S. Harmsted Chubb, of the American Museum of Natural History, heard four or five katydids in 1921 near 250th Street, between Van Cortlandt Park and the Hudson River.

It is also worth while to record that the oblong-winged katydid, *Amblycorypha oblongifolia* (De Geer), was very scarce on Staten Island during 1921, while it was exceedingly abundant there in 1920.

As the eggs are known to require from two to three years to hatch, the insect will probably appear in numbers in 1922 or 1923.

While near Black Pond, Fairfax County, Virginia, on September 25, 1921, Mr. Clarence R. Shoemaker called the attention of the writer to a female *Amblycorypha rotundifolia* (Scudder) on a bush. It was a green example with the tegmina marbled with straw-color, which seems to be a rare variation. It is the only specimen so marked in the writer's collection. Straw-colored males have been found which sometimes have the tegmina spotted with small dots of a darker brown. Pink individuals are much more common in *oblongifolia* than in this species.—WM. T. DAVIS.

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING OF FEB. 1.

A regular meeting of the New York Entomological Society was held at 8 P.M. on February 1, 1921, in the American Museum of Natural History. Pres. John D. Sherman, Jr., in the chair, with 14 members and one visitor present.

Mr. Edward Davis Quirsfeld, 523 4th St., Union Hill, N. J., was elected an active member.

A letter from Mr. R. P. Dow, absent in California, was read.

Mr. Nicolay gave the result of his examination of the Pselaphidæ of Mr. Davis' collection, calling attention especially to specimens of *Batrisesodes foveicornis* from Amagansett, Flushing and Jamaica, Long Island, and of *Batrisesodes globosus* from Staten Island, April 17th, 1908; and then read a paper on "Acmaeoderæ" illustrated by two boxes from his collection and blackboard drawings of the parts used in classifying the species by Prof. H. C. Fall, in his last revision. Some rare species from the collections of Beyer, Notman, Mason, Woodgate, Fisher, Rehn and Hebard were pointed out.

Mr. Wm. T. Davis, under the title "Insects from North Carolina," exhibited four large boxes of insects and stated that he and Mr. James P. Chapin of the American Museum of Natural History had visited North Carolina in June, 1920. Nine days were spent at Southern Pines where the tree frog *Hyla andersonii* and the carpenter frog *Rana virgatipes* were collected; the former has not previously been reported from North Carolina. Three species of Pitcher Plants, namely: *Sarracenia purpurea*, *Sarracenia flava* and *Sarracenia rubra*, grow in the vicinity of Southern Pines. While so fatal to many insects that are lured to their death by the leaves of these plants, there are nevertheless quite a number of species that either eat the substance